

PTO/PTO 22 MAR 2006 PCT #

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

HELLBERG, R.

Atty. Ref.: 4147-78

Serial No. 10/501,392

TC/A.U.: 2817

Filed: July 15, 2004

Examiner: Mottola, Steven J.

For: COMPOSITE POWER AMPLIFIER

* * * * *

March 22, 2006

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT

- ☐ 1. **PTO/SB/08a Pursuant to 37 CFR 1.97(b)**
[within 3 months of filing or prior to 1st Office Action on the merits]
N/C
- ☐ 2.(a) **Statement Pursuant to 37 CFR 1.97(c)**
[before Final Office Action or Allowance (requires Rule 97(e)
Statement or Rule 17(p) fee)]
N/C
- ☒ 2.(b) **Fee Payment Pursuant to 37 CFR 1.97(c)**
[before Final Office Action or Allowance (requires Rule 97(e)
Statement or Rule 17(p) fee)]
\$180.00
- ☐ 3. **Pursuant to 37 CFR 1.97(d)**
[after Final Office Action or Allowance (requires Rule 97(e)
Statement and Rule 17(p) fee), but before final fee payment]
\$180.00

The following are submitted in the above-identified application in compliance with
37 C.F.R. §§ 1.97 and 1.98:

- ☒ 4. A list of documents on Form PTO/SB/08a together with copies of
each identified document and a translation or a concise explanation
of each non-English language document (such as a Search Report)
is enclosed herewith.

03/22/2006 MAILING 00000000 10301000

01 PCT/005

100.00 00

HELLBERG, R.
Serial No. 10/501,392

This paper is submitted in accordance with:

- ☐ 5. 37 CFR 1.97(b): [within 3 months of filing or prior to 1st Office Action]
- ☒ 6. 37 CFR 1.97(c): [before Final Office Action or Allowance, whichever is earlier]; and
 - ☐ a) The required Statement made in item 8 below; or
 - ☒ b) The \$180.00 fee specified in 37 CFR §1.17(p) for submission of this Information Disclosure Statement is authorized in item 9 below.
- ☐ 7. 37 CFR §1.97(d): [after Final Office Action or Allowance (requires Rule 97(e) Statement and Rule 17(p) fee), but before final fee payment]; and
 - ☐ a) The fee (\$180.00) required by 37 CFR §1.17(p) is submitted herewith; and
 - ☐ b) The required Statement is stated in item 8 below.
- ☐ 8. Statement under 37 CFR 1.97(e)
 - ☐ a) The undersigned attorney of record hereby certifies under 37 C.F.R. §1.97(e) that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement (each item contained in this IDS was the first citation of that item by a foreign patent office in a counterpart foreign application which occurred no more than three months prior to the filing of this IDS); or
 - ☐ b) No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this Statement, after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.
- ☒ 9. Please charge all deficiency fees associated with the submission of this Information Disclosure Statement and any other fees applicable to this application to Deposit Account No. 14-1140. An original and one (1) copy of this document are enclosed.

HELLBERG, R.
Serial No. 10/501,392

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____



John R. Lastova
Reg. No. 33,149

JRL:sd
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

**INFORMATION DISCLOSURE
CITATION**

ATTY. DOCKET NO.

SERIAL NO.

4147-78

10/501,392

APPLICANT

HELLBERG, R.

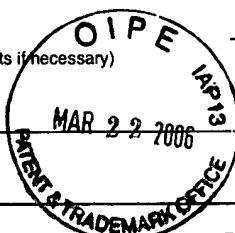
(Use several sheets if necessary)

FILING DATE

TC/A.U.

July 15, 2004

2817

**U.S. PATENT DOCUMENTS**

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,054,896	04/2000	Wright et al.			
	5,901,346	05/1999	Stengel et al.			
	5,568,086	10/1996	Schuss et al.			

FOREIGN PATENT DOCUMENTS

DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
WO 02/05421	01/2002	WIPO			
WO 01/91282	11/2001	WIPO			
WO 02/39577	05/2002	WIPO			

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

	H. Chireix; "High Power Outphasing Modulation;" Proceeding of the Institute of Radio Engineers; Vol. 23, No. 11, November 1935; pp. 1370-1392.
	W. H. Doherty; "A New High Efficiency Power Amplifier for Modulated Waves;" Proceedings of the Institute of Radio Engineers; Vol. 24, No. 9; September 1936; pp. 1163-1182.
	Frederick H. Raab; "Efficiency of Outphasing RF Power-Amplifier Systems;" IEEE Transactions on Communications, Vol. COM-33, No. 10, October 1985; pp. 1094-1099.
	Bob. Stengel and William R. Eisenstadt; "LINC Power Amplifier Combiner Method Efficiency Optimization;" IEEE Transactions on Vehicular Technology, Vol. 49, No. 1, January 2000; pp. 229-234.
	Xuejun Zhang and Lawrence E. Larson; "Gain and Phase Error-Free LINC Transmitter;" IEEE Transactions on Vehicular Technology, Vol. 49, No. 5; September 2000; pp. 1986-1994.
	"Ampliphase AM Transmission System," ABU Technical Review, No. 33; July 1974; pp. 10-18.
	Irfan Ullah; "Output Circuit of an Ampliphase Broadcast Transmitter;" ABU Technical Review, No. 63; July 1979; pp. 17-24.
	Frederick H. Raab; "Efficiency of Doherty RF Power-Amplifier Systems;" IEEE Transactions on Broadcasting; Vol. BC-33, No. 3; September 1987; pp. 77-83.
	David M. Upton and Peter R. Maloney; "A New Circuit Topology to Realize High Efficiency, High Linearity, and High Power Microwave Amplifiers;" IEEE Proc. Rawcon 1998; pp. 317-320.
	International Search Report February 20, 2003 in corresponding PCT Application PCT/SE2002/02320.

*Examiner

Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.